

CHARGE NUMBER: 1901  
PROGRAM TITLE: BIOCHEMICAL MODIFICATION OF TOBACCO  
PERIOD COVERED: NOVEMBER 1-30, 1973  
PROJECT LEADER: D. M. TENG  
DATE OF REPORT: DECEMBER 7, 1973

## I. WHOLE SMOKE ASSAY<sup>1, 2, 3</sup>

Work has been continued to adapt the E. coli bioassay for testing the effect of whole cigarette smoke. AD and 1R1 cigarettes as well as cigarettes made from green tobacco (freeze dried and equilibrated), flue-cured and air-cured tobacco were tested. There are no mechanical problems in adapting the E. coli assay for testing whole smoke. The only problem witnessed is that two cigarettes of the same type (same blend, RTD, weight and moisture content) smoked with the same smoking machine for the same number of puffs do not yield the same size butts. The difference is so obvious that some kind of correction is required so that different tobaccos can be compared.

Work has been continued to generate data so we can compare cigarettes made from different tobaccos by:

- A. TPM
- B. Same number of puffs
- C. On same weight basis
- D. Smoke to same butt length

This work will be reported when enough data are gathered.

## II. GREEN SLURRY FERMENTATION<sup>2</sup>

A microfermenter was received during the last part of this month. It is now operational and will be used for determining the conditions for green tobacco slurry fermentation.

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III. REFERENCES

- |    |           |      |
|----|-----------|------|
| 1. | D. Teng   | 6237 |
| 2. | B. Semp   | 6343 |
| 3. | B. Wright | 6337 |

/slb

*D. M. Teng*

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